

In The United States Patent And Trademark Office

In re Application of: Xiaolian Gao et al.

Serial No.: 10/553,328

Filing Date: Unassigned

Priority Date: April 14, 2003

Examiner: Unknown

Group No.: 1623

Confirmation No.: Not Assigned

For: Novel Reagent Compounds and Methods of Making and Using the Same

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Dated:

4-12-06


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CERTIFICATE OF MAILING

Express Mail No.: EV 465741784 US
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By: Marisa Sweeney

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FOREIGN PATENT OR PUBLISHED FOREIGN PATENT APPLICATION						
Examiner Initial	Cite No. ¹	Foreign Patent Document	Publication Date	Country or Patent Office	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T*
		Country Code ² Number ³ Kind Code ⁴ <small>(if known)</small>	MM-DD-YYYY			

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NON PATENT LITERATURE DOCUMENTS			^{T²}
Examiner Initial*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, pagel(s), volume-issue number(s), publisher, city and/or country where published.	
	3.	WASSERMAN, S.R., et al. Structure and reactivity of alkylsiloxane monolayers formed by reaction of alkytrichlorosilanes on silicon substrates. <i>Langmuir</i> , 5, (1989) 1074-1087	
	4.	BALACHANDER, N. et al. Monolayer Transformation by Nucleophilic Substitution: Applications to the Creation of New Monolayer Assemblies. <i>Langmuir</i> , 6, (1990) 1621-1627	
	5.	PETRI, D.F.S., et al. An improved method for the assembly of amino-terminated monolayers on SiO ₂ and the vapor deposition of gold layers. <i>Langmuir</i> , 15, (1999) 4520-4523	
	6.	INGALL, M.D.K., et al. Surface functionalization and imaging using monolayers and surface-grafted polymer layers. <i>J. Am. Chem. Soc.</i> , 121, (1999) 3607-3613	
	7.	KATZHENDLER, J., et al. The effect of spacer, linkage and solid support on the synthesis of oligonucleotides. <i>Tetrahedron</i> , 45, (1989) 2777-2792	
	8.	TEMSAMANI, J., et al. Sequence identity of the n -1 product of a synthetic oligonucleotide. <i>Nucleic Acids Res.</i> , 23, (1995) 1841- 1844	
	9.	FEARON, K.L., et al. Investigation of the 'n -l' impurity in phosphorothioate oligodeoxynucleotides synthesized by the solid-phase ~-cyanoethyl phosphoramidite method using stepwise sulfurization. <i>Nucleic Acids Res.</i> , 23, (1995) 2754-2761	
	10.	IVYER, R.P., et al. Improved procedure for the reduction of N-I content in synthetic oligonucleotides. <i>Nucl. Nucl.</i> , 14, (1995) 1349-1357	

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	11.	MASKOS, U. et al. Oligonucleotide hybridization on glass supports: a novel linker for oligonucleotide synthesis and hybridization of oligonucleotides in situ. <i>Nucleic Acids Res.</i> , 20, (1992) 1679-1684	
	12.	GRAY, D.E., et al. Ellipsometric and interferometric characterization of DNA probes immobilized on a combinatorial array. <i>Langmuir</i> , 13, (1997) 2833-2842	
	13.	SHCHEPINOV, M.S., et al. Steric factors influencing hybridization of nucleic acids to oligonucleotide arrays. <i>Nucleic Acids Res.</i> , 25, (1997) 1155-1161	
	14.	GUO, Z., et al. Direct fluorescence analysis of genetic polymorphisms by hybridization with oligonucleotide arrays on glass supports. <i>Nucleic Acids Res.</i> , 22, (1994) 5456-5465	
	15.	PIRRUNG, M.C. et al. Comparison of methods for photochemical phosphoramidite-based DNA synthesis. <i>J. Org. Chem.</i> , 60, (1995) 6270-6276	
	16.	PIRRUNG, M.C. and Fallon, L. Proofing of photolithographic DNA synthesis with 3',5'-dimethoxybenzoinyloxycarbonyl-protected deoxynucleoside phosphoramidites. <i>J. Org. Chem.</i> , 63, (1998) 241-246	
	17.	PEASE, A.C., et al. Light-generated oligonucleotide arrays for rapid DNA sequence analysis. <i>Proc. Natl Acad. Sci. USA</i> , 91, (1994) 5022-5026	
	18.	MCGALL, G.H., et al. Light-directed synthesis of high-density oligonucleotide arrays using semiconductor photoresists. <i>Proc. Natl Acad. Sci. USA</i> , 93, (1996) 13555-13560	
	19.	BEIER, M. et al. Versatile derivatization of solid support media for covalent bonding on DNA-microchips. <i>Nucleic Acids Res.</i> , 27, (1999) 1970-1977	

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20.	Yu, D., et al. Diethoxy N, N-diisopropylphosphoramidite as an improved capping reagent in the synthesis of oligonucleotides using phosphoramidite chemistry. <i>Tetrahedron Letters</i> 35, (1994) 8565-8568	
21.	LEPROUST, E., et al. Characterization of oligodeoxyribonucleotide synthesis on glass plates. <i>Nucleic Acids Res.</i> , 29, (2001) 2171-2180	
22.	ECKSTEIN, F. (ed.) Oligonucleotides and Analogues, A Practical Approach. IRL Press, Oxford, UK, (1991) 109-135	
23.	FIELDS, G.B. (ed.) Methods in Enzymology. Academic Press, New York, USA, 289, (2001) Academic Press, New York, USA	
24.	SEARS et al. Toward Automated Synthesis of Oligosaccharides and Glycoproteins. <i>Science</i> 291, (2001) 2344-2350, American Association for the Advancement of Science, Washington, D.C. USA	
25.	HARRIS , J.M. et al. (ed.), Poly(Ethylene Glycol) ACS Symposium Series No. 680 (1997) American Chemical Society, Washington, D.C. USA	
26.	ARAKAWA, T. et al. Mechanism of Poly(ethylene glycol) Interaction with Proteins, <i>Biochemistry</i> 24, (1985) 6756-6762, American Chemical Society, Washington, D.C., USA	
27.	ZHU, X-Y., et al. Grafting of High-Density Poly(ethylene glycol) Monolayers on Si(111), <i>Langmuir</i> 17 (2001) 7798-7803, American Chemical Society, Washington, D.C., USA	
28.	KNOLL, E. et al., Unimolecular Beacons for the Detection of DNA-Binding Proteins. <i>Anal. Chem.</i> (2004) 76, 1156-1164, American Chemical Society, Washington, D.C., USA	

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